

Attorney's Docket No.: 10559-335001/P9850X
Intel Corporation

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of controlling volume of a received signal at a near-end device receiver comprising:
 - receiving a signal originating at a far-end device;
 - computing an automatic gain control (AGC) gain;
 - computing a weighted dynamic range compression (DRC) gain; ~~and~~
 - determining a total automatic volume control (AVC) gain from by combining an additional gain weighted by a previously determined level of ambient noise at the near-end device receiver with the AGC gain and the weighted DRC gain; and
 - applying the determined AVC gain to adjust speech level and dynamic range in the received signal.

2. (Original) The method of Claim 1, where the computation of the AGC and DRC gains are performed on a block of speech samples and updated from one block to the next.

- 3-4. (Canceled).

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5. (Previously Presented) The method of Claim 1, further comprising weighting the DRC gain by the greater of a transmission noise level and the DRC gain factor.

6. (Canceled).

7. (Original) The method of Claim 1, wherein the additional gain is a constant gain.

8. (Original) The method of Claim 1, further comprising smoothing the total AVC gain.

9. (Original) The method of Claim 8, further comprising smoothing over several frames.

10. (Original) The method of Claim 1, further comprising computing the DRC gain using noise dependent and receive signal independent parameters according to the formula:

$$\text{drc_gain} = \text{MAX_DRC_GAIN} * \max(\text{drc_gain_factor}, \text{noise factor});$$

wherein MAX_DRC_GAIN is an upper limit on the DRC gain.

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11. (Original) The method of Claim 1, further comprising computing the AGC gain using:

$$\text{agc_gain} = (\text{LEVEL1} - \text{envelope});$$

wherein LEVEL1 is the target level for a receive signal envelope level;

wherein the computation is limited such that $\text{agc_gain} = \min(\text{MAX_AGC_GAIN}, \text{agc_gain})$;

wherein MAX_AGC_GAIN is the upper limit on the AGC gain and $\text{agc_gain} = \min(\text{MAX_RMS} - \text{long_term_rms}, \text{agc_gain})$, or that the AGC gain is the lesser of the calculated AGC gain and the maximum RMS minus the long term RMS.

12. (Currently Amended) An apparatus ~~The device~~ comprising:

a receiver which receives a transmitted signal originating at a far-end device;

a processor which determines an automatic gain control (AGC) gain, a dynamic range compression (DRC) gain, a weighted additional gain based on a level of ambient noise at the near-end device receiver, wherein the processor combines the AGC gain, the DRC gain, and the weighted additional gain to obtain an automatic volume control (AVC) gain; and

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a volume control which adjusts a volume of the received signal based on the AVC gain.

13. (Original) The device of Claim 12, further comprising applying the AVC gain to adjust the volume of the received signal.

14. (Original) The device of Claim 12, wherein the received signal includes speech.

15. (Previously Presented) The device of Claim 12, wherein the processor weights the DRC gain by the greater of a transmission noise level and the DRC gain factor.

16. (Canceled).

17. (Original) The device of Claim 12, wherein the additional gain is a constant gain.

18. (Original) The device of Claim 12, wherein the processor smoothes the AVC gain.

19. (Currently Amended) A method comprising:

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computing an automatic volume control (AVC) gain based on an automatic gain control (AGC) gain, a dynamic range compression (DRC) gain, and a weighted constant gain based on a level of ambient noise at a near-end device receiver; and

adjusting a volume at the receiver based on the AVC gain applied to a signal originating from a far-end device.

20. (Original) The method of Claim 19, further comprising weighting the DRC gain by the greater of the transmission noise level and the DRC gain factor and weighing the constant gain by the transmission noise level.

21. (Original) The method of Claim 20, further comprising combining the AGC gain with the weighted DRC gain and the weighted constant gain to obtain the AVC gain.

22. (Original) The method of Claim 19, further comprising smoothing the computed AVC gain.

23. (Original) The method of Claim 19, further comprising decoding speech in a received signal.